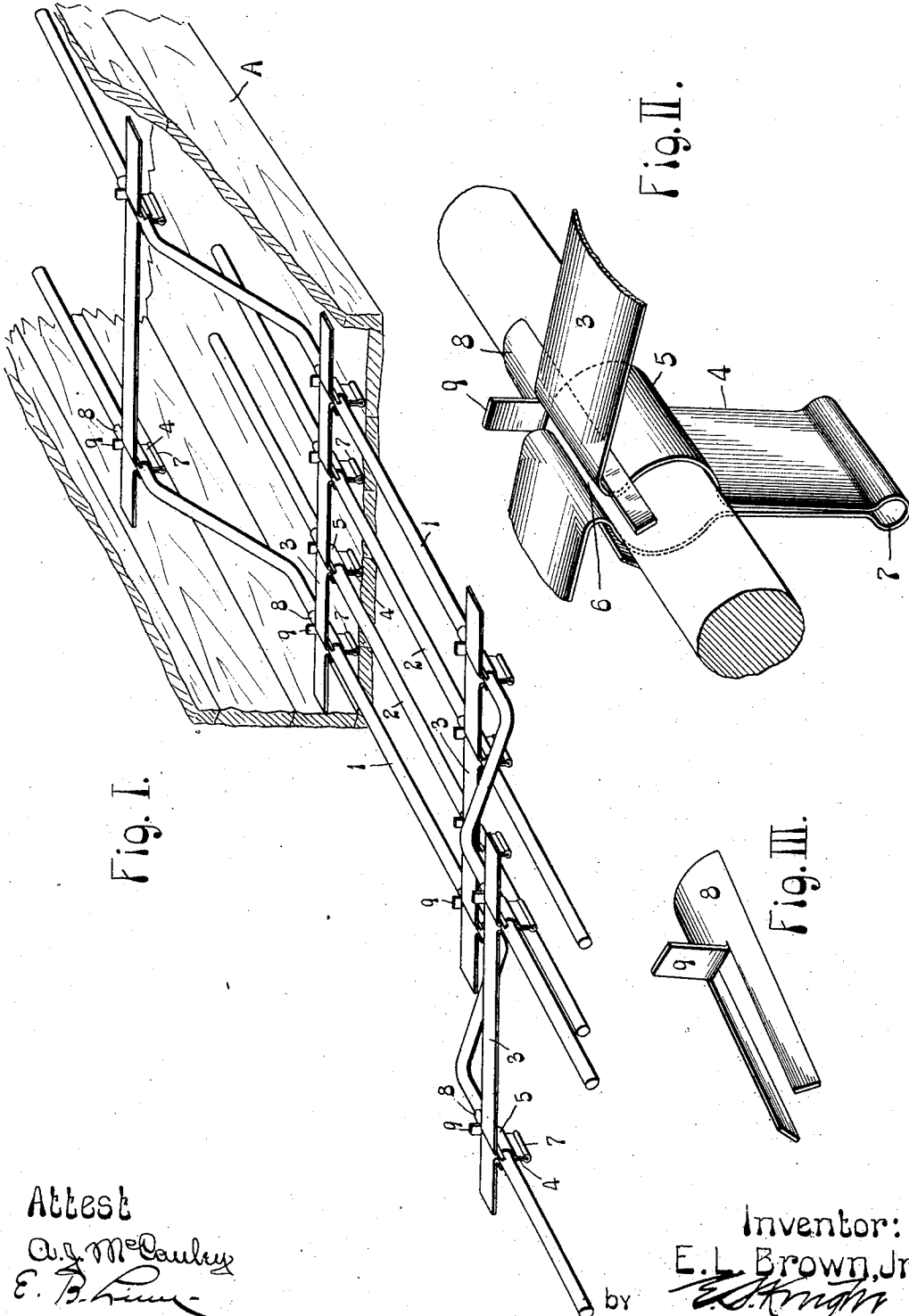


E. L. BROWN, JR.
UNIT REINFORCING FRAME FOR CONCRETE CONSTRUCTION.
APPLICATION FILED NOV. 26, 1909.

965,070.

Patented July 19, 1910.



Attest
A. J. McCauley
E. B. Riney

Inventor:
E. L. Brown, Jr.,
by *E. J. Riney*
Atty.

UNITED STATES PATENT OFFICE.

EUGENE L. BROWN, JR., OF ST. LOUIS, MISSOURI.

UNIT REINFORCING-FRAME FOR CONCRETE CONSTRUCTION.

965,070.

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To all whom it may concern:

Be it known that I, EUGENE L. BROWN, Jr., a citizen of the United States of America, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Unit Reinforcing-Frames for Concrete Construction, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to a unit reinforcing frame for concrete constructions, and it has for its object to provide a frame of this description comprising parts that may be transported when the frame is in a knock down condition and which, when assembled, furnishes a unit reinforcing frame having all necessary rigidity.

Figure I is a perspective view of my reinforcing frame set up and ready for use, with a fragment of a mold in which the frame may be laid illustrated in connection with the frame. Fig. II is an enlarged perspective view of one of the reinforcing rods, a fragment of one of the stays, and one of the keys by which the pocket members of the stays are held to the reinforcing rods. Fig. III is an enlarged perspective view of one of the keys.

In the accompanying drawings:—A designates a frame such as is commonly used in the production of concrete structures, and in which reinforcing rods are laid to be bedded in the concrete that is shaped in said mold.

1 and 2 designate reinforcing rods which, as shown in the drawings, are round in cross section, but which may be of any other suitable shape in cross section. In the drawings I have shown the rods 1 as having portions thereof elevated above other portions and the rods 2 as extending in straight lines, these different arrangements of the rods being common, and no invention *per se* being herein claimed for such arrangement. It is obvious that all of the rods may extend in straight lines, or that any desired number of them may diverge at desirable points from straight lines.

3 designates stay members by which the several reinforcing rods that enter into a unit frame constructed in accordance with my improvement may be connected and held assembled so that they will be maintained in

their proper positions relative to each other. Each of these stays is provided with a plurality of legs 4, produced by forming folds in the stay strip, which is preferably of sheet metal, and at the upper end of each leg is a pocket 5, of sufficient dimensions to permit of its being occupied by a reinforcing rod that is to be connected with a companion reinforcing rod, or rods, extending parallel with the first named rod. The reinforcing rods are entered into the pockets 5 through throats 6 at the tops of the legs 4, the introduction of the rods into the pockets being readily permissible, due to the legs 4 being of resilient material, so that their sides or webs will spread apart while the rods are being inserted into the pockets and approach each other after the rods have been introduced. The legs 4 are preferably bulged at their lower closed ends, as seen at 7, thereby affording spring hinges at the ends of the legs.

8 designates bifurcated keys that are adapted to straddle the sides of the pockets 5 at the upper ends of the legs 4, and whereby the sides of the pockets are prevented from spreading outwardly after the reinforcing rods have been entered therinto. These keys are produced from sheet metal, and they preferably conform to segments of the reinforcing rods in order that they will partially surround said rods and the sides of the pockets 5 are provided with upwardly projecting tongues 9 that are adapted to abut against the side edges of the stays 3.

It will be readily appreciated that when the reinforcing rods entering into a unit frame constructed in accordance with my invention are laid in the pockets of the stays 3 and are clamped within the pockets of said stays by the construction described, a unit frame is produced which may be handled in any necessary manner, without the parts of the frame becoming separated from each other and that the assemblage of the parts of the frame may be very speedily carried out at the time that the frame is to be put into use. It will further be noted that the legs 4 serve as supports for the reinforcing rods, so that they are upheld from the mold in which a body of concrete is shaped, and consequently the reinforcing rods are embedded at the proper position in the body of concrete.

I claim:—

1. A unit frame comprising stays having
folded flexible legs the members of which
lie flatly against each other and which are
5 adapted to be spread apart, the legs having
integral therewith segment shaped pocket
members mating with each other and in
close relation at their lower ends, reinforcing
rods supported in said pockets, and keys
10 fitted to said pocket members above the re-
inforcing rods to hold the pocket members
from separation.

2. A unit frame comprising stays having
folded flexible legs the members of which

lie flatly against each other and which are 15
adapted to be spread apart, the legs having
integral therewith segment shaped pocket
members mating with each other and in
close relation at their lower ends, reinforcing
rods supported in said pockets, and bi- 20
furcated keys straddling said pocket mem-
bers above the reinforcing rods to hold the
pocket members from separation.

EUGENE L. BROWN, JR.

In the presence of—
M. C. HAMMON,
E. B. LINN.